6AU6-A

Sharp-Cutoff Pentode

7-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:		
Voltage (AC or DC)	6.3	volts
Current at 6.3 volts	0.3 ± 6%	amp
Warm-up time (Average)	11	sec

Direct Interelectrode Capacitances:

	Without External Shield	*With External Shield*▲	
Pentode Connection:			
Grid No.1 to plate	0.0035 max.	0.0035 max.	μμf
Grid No.1 to cathode, grid No.3 & internal shield, grid No.2, and heater	5.5	5.5	μμf
Plate to cathode, grid No.3 & internal shield, grid No.2, and heater	5	5	μμf
Triode Connection:●			
Grid No.1 to plate, grid No.3 & internal shield, and grid No.2	2.6	2.6	μμf
Grid No.1 to cathode and heater	3.2	3.2	μμf
Plate, grid No.3 & internal shield, and grid No.2 to cathode and heater	1.2	8.5	μμf

Characteristics, Class A_1 Amplifier:

Pentode Connection

Plate Supply Voltage	100	250	250	volts
Grid No.3	*Connected to cathode at socket*			
Grid-No.2 Supply Voltage	100	125	150	volts
Cathode Resistor	150	100	68	ohms
Plate Resistance (Approx.)	0.5	1.5	1	megohms
Transconductance	3900	4500	5200	μmhos
Plate Current	5	7.6	10.6	ma
Grid-No.2 Current	2.1	3	4.3	ma
Grid-No.1 Voltage (Approx.) for plate μa = 10	-4.2	-5.5	-6.5	volts

Triode Connection●

Plate Supply Voltage	250	volts
Cathode Resistor	330	ohms
Amplification Factor	36	

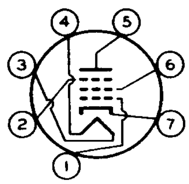
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Plate Resistance (Approx.)	7500	ohms
Transconductance	4800	μmhos
Plate Current.	12.2	ma

Mechanical:

Operating Position . . . . .Any
Maximum Overall Length . . . . 2-1/8"
Maximum Seated Length. 1-7/8"
Length, Base Seat to Bulb Top (Excluding tip). . 1-1/2" ± 3/32"
Diameter . . . . 0.650" to 0.750"
Dimensional Outline. . . . . .See *General Section*
Bulb T5-1/2
Base . . . . . . .Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW 7BK

Pin 1 - Grid No.1
Pin 2 - Grid No.3, Internal Shield
Pin 3 - Heater



Pin 4 - Heater
Pin 5 - Plate
Pin 6 - Grid No.2
Pin 7 - Cathode

AMPLIFIER — Class A_1

Maximum Ratings, ***Design-Maximum Values:***

	Triode Connection●	*Pentode Connection*	
PLATE VOLTAGE.	275 max.	330 max.	volts
GRID No.3 (SUPPRESSOR GRID).	-	*Connect to cathode at socket*	
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	-	330 max.	volts
GRID-No.2 VOLTAGE.	-	*See Grid-No.2 Input Rating Chart at front of Receiving Tube Section*	
GRID-No.1 (CONTROL-GRID) VOLTAGE: Positive-bias value. . . .	0 max.	0 max.	volts
GRID-No.2 INPUT: For grid-No.2 voltages up to 165 volts	-	0.75 max.	watt
For grid-No.2 voltages between 165 and 330 volts.	-	*See Grid-No.2 Input Rating Chart at front of Receiving Tube Section*	
PLATE DISSIPATION.	3.5 max.	3.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE: Heater negative with respect to cathode . . .	200 max.	200 max.	volts
Heater positive with respect to cathode . . .	200★ max.	200★ max.	volts

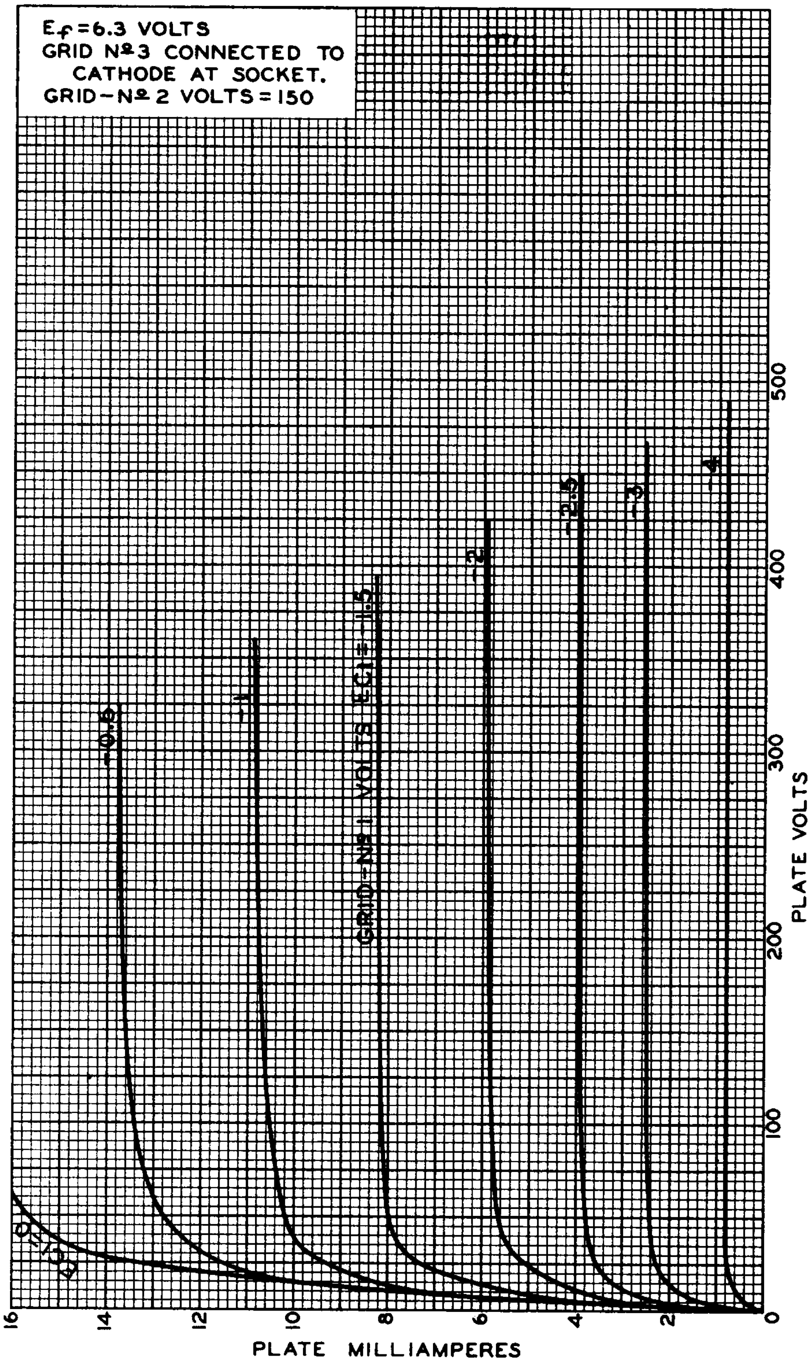
Typical Operation as Resistance-Coupled Amplifier:

See *RESISTANCE-COUPLED-AMPLIFIER CHART No.8* at front of this Section

▲ With external shield JEDEC No.316 connected to cathode.
● Grid No.3 and grid No.2 connected to plate.
★ The dc component must not exceed 100 volts.

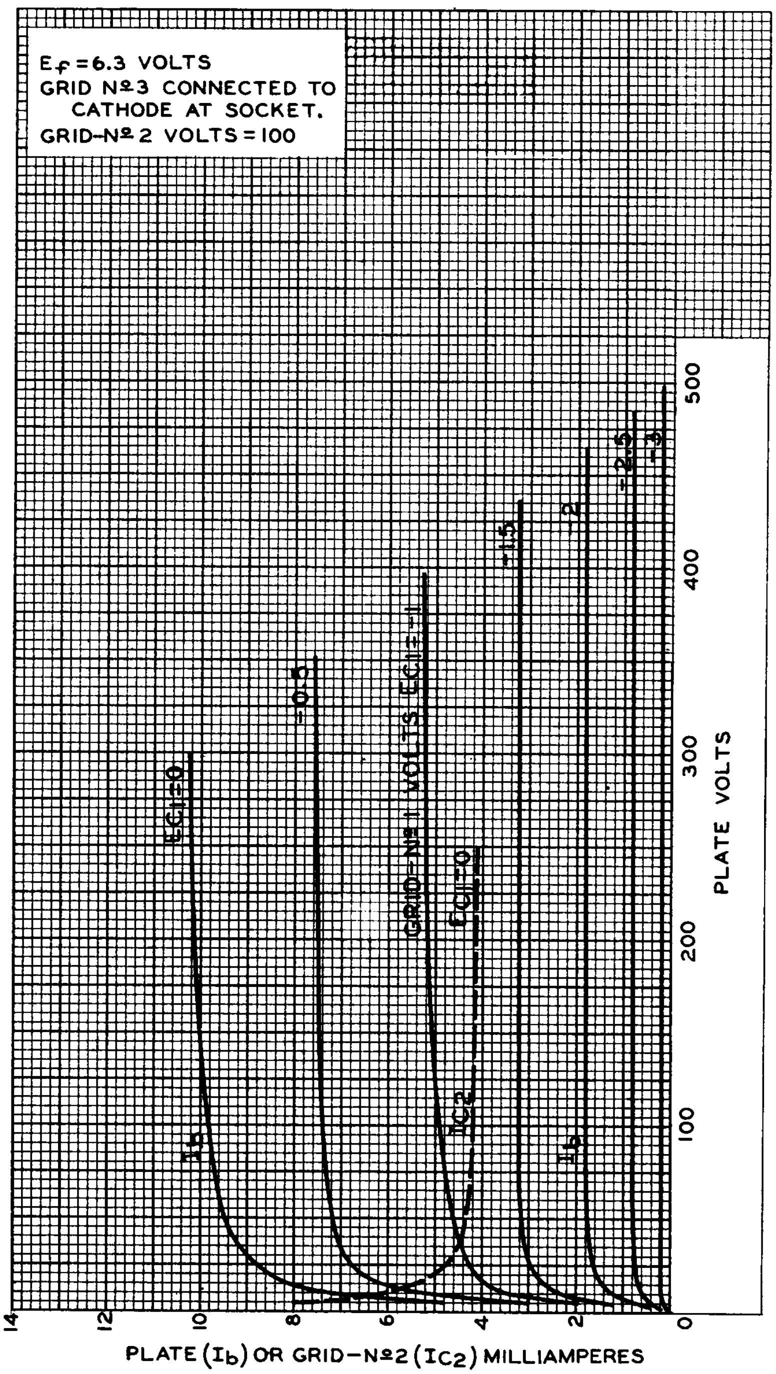
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AVERAGE PLATE CHARACTERISTICS
Pentode Connection



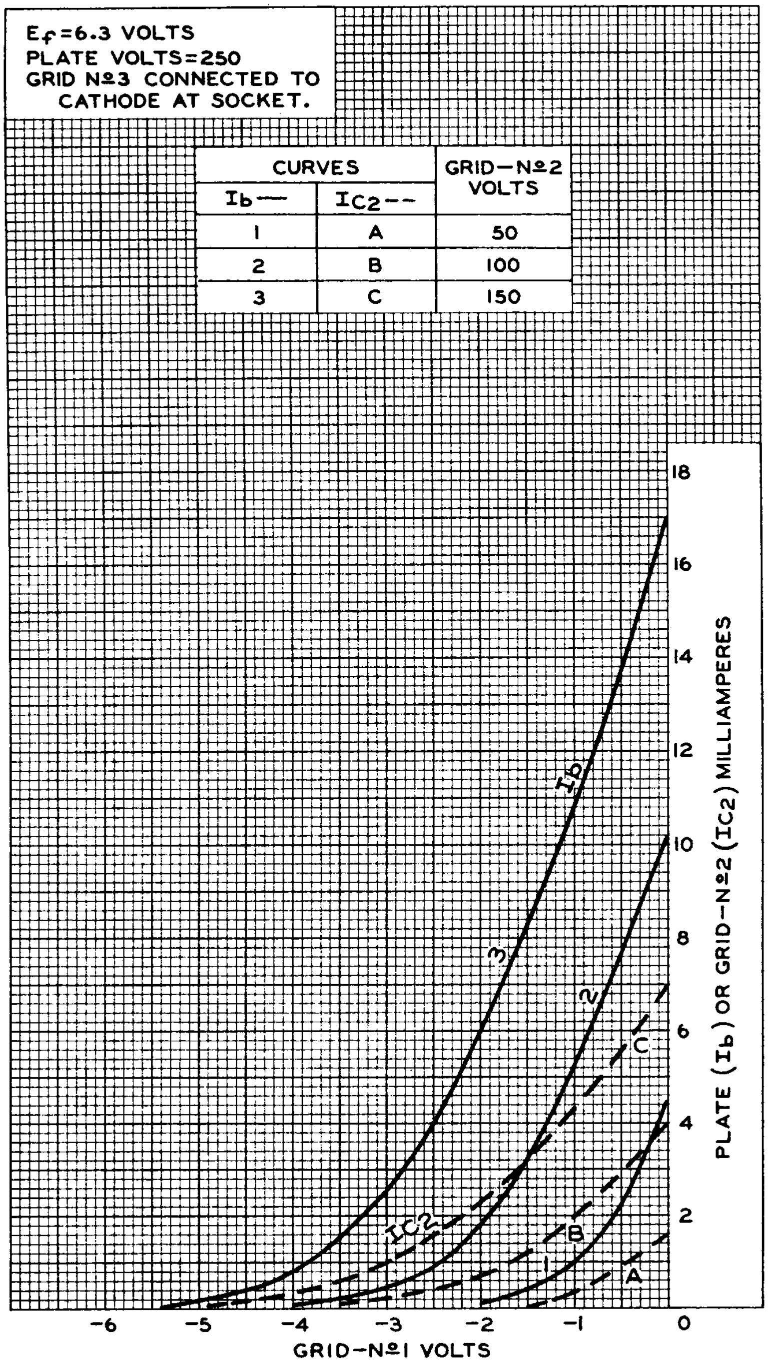
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AVERAGE CHARACTERISTICS
Pentode Connection



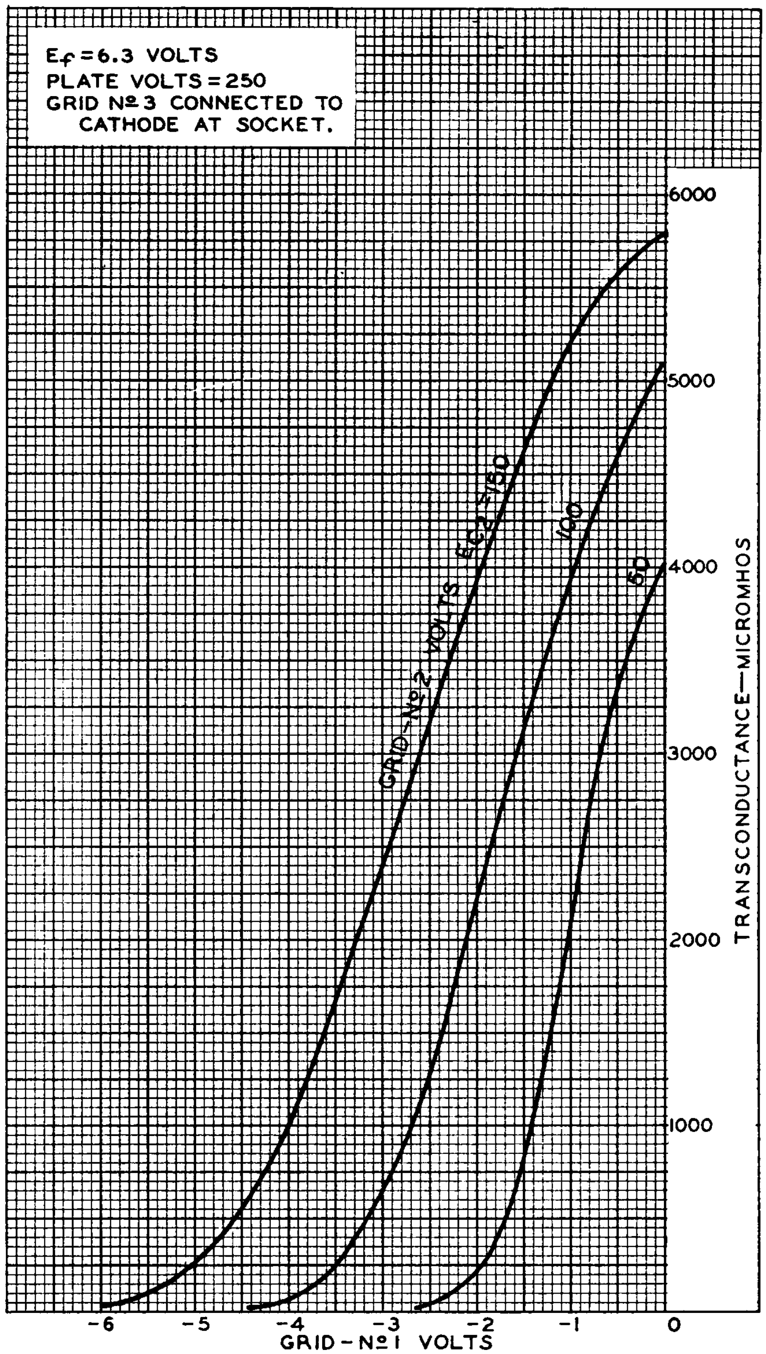
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AVERAGE CHARACTERISTICS
Pentode Connection



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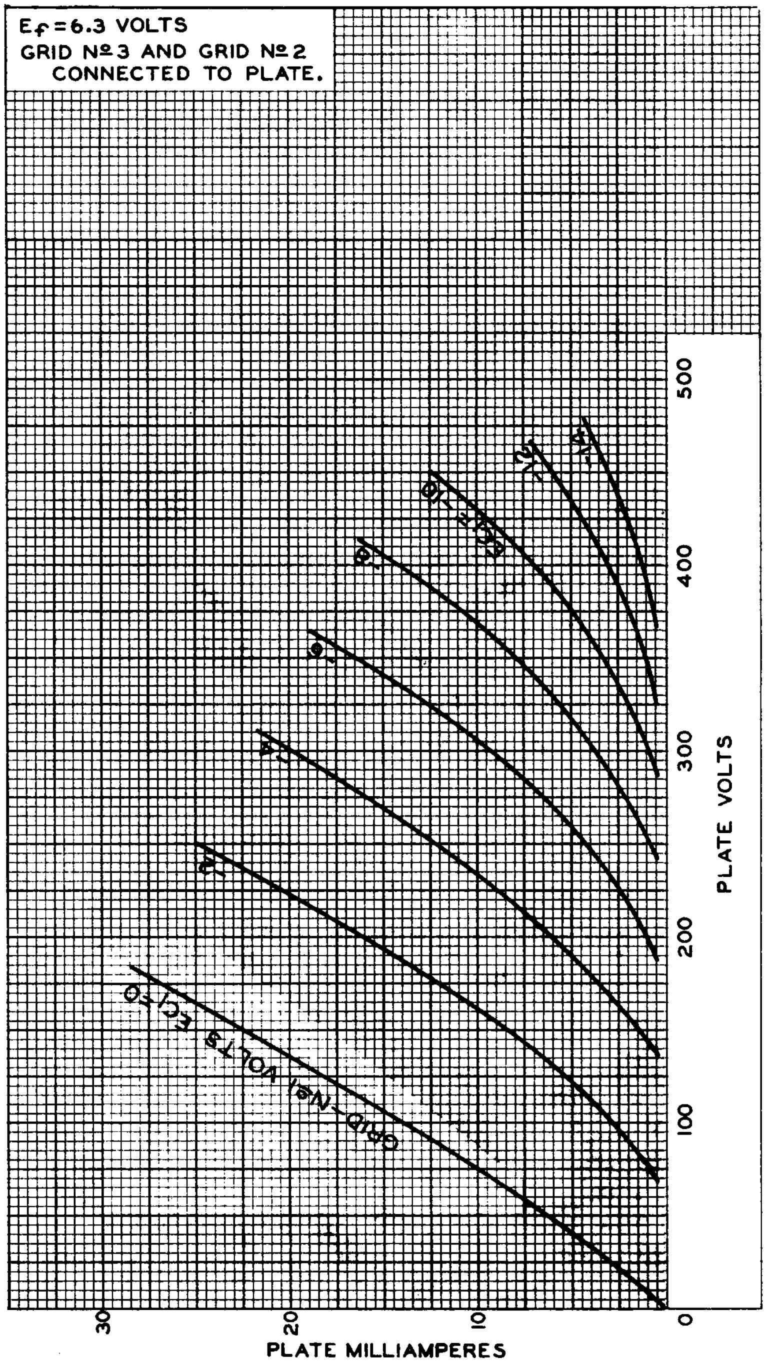
AVERAGE CHARACTERISTICS
Pentode Connection



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AVERAGE PLATE CHARACTERISTICS
Triode Connection



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